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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/800,323	03/11/2004	Jessica G. Chiu	5618P3784	1769

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EXAMINER	
SCHELL, LAURA C	
ART UNIT	**PAPER NUMBER**
3767	

MAIL DATE	DELIVERY MODE
03/31/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/800,323	CHIU ET AL.	
	Examiner	Art Unit	
	LAURA C. SCHELL	3767	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *3/14/08*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *61-68 and 79-83* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *61-68 and 79-83* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 61-66, 68 and 79-83 are rejected under 35 U.S.C. 102(e) as being anticipated by Peacock et al. (US Patent No. 6,695,810). Peacock discloses a method comprising: advancing a cannula (Figs. 19a-19d, cannula is 1902) percutaneously through blood vessel (1970) to a region of interest, the cannula having a proximal end (near the fluid sources outside of the blood vessel), a distal end (near 1904), and an exterior surface (1905 for example) at or adjacent the distal end of the cannula axially coupled to a balloon (1910), inflating the balloon from a first diameter to a different second diameter that is at least equivalent to an inner diameter of a blood vessel to occlude the blood vessel at the region of interest (Fig. 19a discloses that balloon 1910

is connected to inflation lumen 1914 so that the balloon may be inflated to occlude the blood vessel as shown in Fig. 19a); infusing a treatment agent to the region of interest distal to the balloon (Fig. 19a discloses that lumen 1960 is in fluid communication with the cardioplegia fluid supply, and when this fluid is released into the blood vessel by lumen 1960 and when the cannula 1950 is in the position of Fig. 19a not occluding openings 1906, the cardioplegia solution will flow out through 1960, into the blood vessel and will be carried through 1903 via openings 1906 and will exit distally of the balloon); perfusing a blood flow between a location in the blood vessel proximal to the balloon and the region of interest distal to the balloon (Fig. 19a discloses that blood flow proximal to the balloon will be perfused between the proximal side of the balloon by entering the openings 1906 and will exit distal to the balloon at opening 1904. Please note that Applicant has not claimed any order in which these steps must be performed).

In reference to claim 62, Peacock discloses that the perfusing includes perfusing blood via a lumen (1903) extending through the cannula from a location proximal to the balloon (entering at 1906) to a location distal to the balloon (exiting at 1904), via a proximal hole through the exterior surface of the cannula (1906) and to the lumen at a location proximal to the balloon (1906 is proximal to the balloon), and a distal hole (1904) through the exterior surface of the cannula and to the lumen at a location distal to the balloon (Fig. 19a does not disclose that the hole distal to the balloon is through the exterior surface of the balloon, however another embodiment of Peacock, such as Fig. 1a, discloses that there are holes (4 and 5) which extend through the exterior surface of the cannula both proximal and distal to the balloon).

In reference to claim 63, Peacock discloses that inflating includes inflating the balloon for a first period of time and perfusing includes deflating the balloon for a second period of time; and at least one more repetition of inflating, infusing and deflating (col. 37, line 59 through col. 38, line 67).

In reference to claim 64, Peacock discloses that perfusing includes retracting back a guidewire disposed through a guidewire lumen extending from the proximal end to the distal end of the cannula and exiting an opening in the cannula distal to a balloon, for a first period of time; wherein retracting includes retracting a distal end of the guidewire from a location distal to at least one hole from the guidewire lumen through the exterior surface of the cannula and proximal to the balloon to a location proximal to the at least one hole (col. 31, lines 51-58).

In reference to claim 65, Peacock discloses advancing the guidewire to a location distal to the at least one hole to prohibit blood and/or a treatment agent perfusion between a location in the blood vessel proximal to the balloon and the region of interest, for a second period of time, and repeating infusing, retracting and advancing at least once more (col. 31, lines 33-58).

In reference to claim 66, Peacock discloses that retracting includes retracting a distal end of the guidewire to control an amount of a blood and/or a treatment agent perfusion between a location in the blood vessel proximal to the balloon and the region of interest by adjusting the guidewire to extend or retract a distal end of the guidewire to a location amongst a plurality of the at least one hole to allow a blood and/or a

treatment agent to perfuse between the holes and the lumen at a selected perfusion rate (col. 31, lines 33-58).

In reference to claim 68, Peacock discloses that inflating includes increasing an axial length of the balloon (Figs. 19a and 19b); and maintaining the inflation pressure on the inner diameter of the blood vessel (Figs. 19a and 19b).

In reference to claims 79 and 80, Peacock discloses that perfusing comprises perfusing the blood vessel coupled by human vasculature to a beating heart (Fig. 19a discloses that the vessel is coupled to the heart).

In reference to claim 81, Peacock discloses that perfusing includes perfusing blood via a lumen extending through the cannula (lumen 1903) from a location proximal to the balloon (1906 is proximal to the balloon) to a location distal to the balloon (the perfusion exits at 1904 which is distal to the balloon), via a proximal hole through the exterior surface of the cannula (1906 is proximal to the balloon) and a distal hole (1904 is distal to the balloon) through the exterior surface of the cannula and to the lumen at a location distal to the balloon (Fig. 19a does not disclose that the hole distal to the balloon is through the exterior surface of the balloon, however another embodiment of Peacock, such as Fig. 1a, discloses that there are holes (4 and 5) which extend through the exterior surface of the cannula both proximal and distal to the balloon).

In reference to claim 82, Peacock discloses that perfusing comprises perfusing a blood flow from a location in the blood vessel proximal to the balloon, to a location in the region of interest distal to the balloon (Fig. 19a discloses that the perfusion of blood

enter the cannula proximal to the balloon through 1906 and exits distal to the balloon at 1904).

In reference to claim 83, Peacock discloses retracting a distal end of the guidewire to the location proximal to the at least one hole proximal to the balloon to allow the perfusion (col. 31, lines 33-58).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 67 is rejected under 35 U.S.C. 103(a) as being unpatentable over Peacock et al. (US Patent No. 6,695,810) in view of Alt (US Patent No. 6,805,860). Peacock discloses the method substantially as claimed except for the infusing of progenitor cells. Alt, however, discloses a method of infusing progenitor cells (Fig. 1 and col. 13, lines 27- 31). Therefore it would have been obvious to one of ordinary skill in the art at the

time of the invention to have modified Peacock with the step of infusing progenitor cells, as taught by Alt, in order to provide a method of treating a wider spectrum of diseases..

Response to Arguments

Applicant's arguments, see arguments regarding the Davis reference, filed 3/14/2008, with respect to the rejection(s) of claim(s) 61-67 and 79-83 under Davis have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Peacock et al.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LAURA C. SCHELL whose telephone number is (571)272-7881. The examiner can normally be reached on Monday-Friday 9am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Sirmons can be reached on (571) 272-4965. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Laura C Schell/
Examiner, Art Unit 3767
/Kevin C. Sirmons/
Supervisory Patent Examiner, Art Unit 3767